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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/848,780	05/18/2004	Edgar C. Robinson	INT99901	7233

7590 01/27/2009
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1590 Bellevue Avenue - Suite 202
West Vancouver, V7V 1A7
CANADA

EXAMINER

BOLES, DEREK

ART UNIT	PAPER NUMBER
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3749

MAIL DATE	DELIVERY MODE
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01/27/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/848,780	Applicant(s) ROBINSON, EDGAR C.	
	Examiner Derek S. Boles	Art Unit 3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 12-23,30 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) 24-26 is/are allowed.
- 6) ☐ Claim(s) 1-11 and 27-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) 12-23,30 and 31 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim(s) 1, 3, 4, 8, 27 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enander (5,025,985) in view of Akkala (6,283,067). Enander discloses all of the limitations of the claim(s) except for an exhaust stack running from the burner through the water jacket on a first pass for a longitudinal distance generally approaching the length of the water jacket on the first pass. Akkala discloses the presence of a an exhaust stack running from the burner through the water jacket on a first pass for a longitudinal distance generally approaching the length of the water jacket on the first pass. See **82**. Hence, one skilled in the art would find it obvious to modify the system of Enander to include the exhaust stack running from the burner through the water jacket on a first pass for a longitudinal distance generally approaching the length of the water jacket on the first pass of Akkala for the purpose of better efficiency. See Enander fig. 2a, col. 7, line 46 to col. 8, line 14, **48** for the burner and **53** for the exhaust pipe. Regarding claim 4, see col. 8, line 7.

Regarding claim 2, Enander in view of Akkala discloses all of the limitations of the claim except for the exhaust stack having a rectangular cross-section. However, since the applicant has failed to establish any criticality or synergistic results which are derived from the recited configurations, these limitations are considered a matter of obvious design choice. Thus, the

applicant's design configurations would have been an obvious improvement to one of ordinary skill in the art with regard to the apparatus disclosed in Enander.

Regarding claim 5, Enander in view of Akkala discloses the claimed invention except for a second pass through the water jacket. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide multiple passes through a water jacket depending on the desired heat transfer, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enander in view of Akkala. It is well-known in the art of HVAC that a heat exchanger (i.e. an exhaust stack) with more or less surface area contacting a heating medium would create more or less heat transfer. Thus, it would have been obvious to one of ordinary skill in the art to incorporate the features of an exhaust stack contacting liquid on all sides into the system of Enander for the purpose of better heat transfer.

Claim(s) 9, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enander in view of Akkala and in further view of Moore, Jr. et al. (4,925,093). Enander in view of Akkala discloses all of the limitations of the claim(s) except for operating components associated with the heating system being located within a housing which surrounds the burner. Moore, Jr. et al. discloses the presence of a operating components associated with the heating system being located within a housing which surrounds the burner. See col. 7, lines 50-64, **54** and fig. 3. Hence, one skilled in the art would find it obvious to modify the system of Enander in view of Akkala to include the operating components associated with the heating system being

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located within a housing which surrounds the burner of Moore, Jr. et al. for the purpose of compactness. Regarding claim 11, see **40** and **45**.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Enander in view of Akkala. It is well-known in the art of HVAC to design a room liquid to air heat exchanger with a blower. Thus, it would have been obvious to one of ordinary skill in the art to incorporate the features of a blower into the heat exchanger of Enander for the purpose of faster room heating. See **28** and col. 6 lines 60-67.

Allowable Subject Matter

Claims 24-26 allowed.

Response to Arguments

Applicant's arguments with respect to claims 1-11 and 27-29 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The provided references are representative of the state of the art that is applicable to the applicant's invention. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Derek S. Boles at (571) 272-4872 or supervisory patent examiner Steve McAllister at (571) 272-6785.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

D.S.B.

**/DEREK S. BOLES/
PRIMARY EXAMINER
GROUP 3700**

1/27/2009

<i>Application Number</i> 	Application/Control No.	Applicant(s)/Patent under Reexamination	
	10/848,780	ROBINSON, EDGAR C.	
	Examiner	Art Unit	
	Derek S. Boles	3749	